

ABSTRACT

[00120] A laser package comprises a laser diode source having a first Fabry-Perot cavity between a highly reflective back facet and low reflective front facet for providing a first light output for an optical application. A light monitor is positioned adjacent to the back facet and aligned to receive a second light output from the laser diode back facet. A pigtail fiber having a lensed fiber input end is positioned from the laser diode front facet to form an optical coupling region and is aligned relative to the lasing cavity to receive the first light output into the fiber, the light output exiting the package for coupling to the application. A portion of the first light output from the lasing cavity is reflected off the lensed fiber input end with a portion directed back into the lasing cavity and another portion reflected off of the laser diode front facet. The front facet forms with the lensed fiber input end a second Fabry-Perot cavity generating light which is periodically in and out of phase with the light generated in the first Fabry-Perot cavity due to changes in the length of the second Fabry-Perot cavity caused by package ambient temperature changes so that a tracking error is generated in a signal developed by the light monitor. Thus, this invention provides several ways to suppress the formation of the second Fabry-Perot cavity.

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